

MEAN TIME TO RECOVER (MTTR) ADVISORY

Qiang Cao
Sushil Kumar
Tirthankar Lahiri
Yunrui Li
Gianfranco Putzolu

ABSTRACT

A method for simulating different MTTR settings includes determining a simulated MTTR setting and providing a simulated checkpoint queue. The simulated checkpoint queue is associated with the simulated MTTR setting and is an ordered list of one or more elements. Each element represents a buffer, and the ordered list has a head and a tail. The method also includes providing a simulated write counter associated with the simulated MTTR setting. The method further includes, in response to detecting a change to a first buffer, checking if the first buffer is represented in the simulated checkpoint queue. If the first buffer is not represented in the simulated checkpoint queue, an element that represents the first buffer is linked to the tail of the simulated checkpoint queue. An MTTR advisory system includes a memory, one or more processors coupled to the memory, a simulated MTTR setting, a simulated checkpoint queue, and a simulated write counter. The simulated MTTR setting is maintained in the memory. The simulated checkpoint queue is maintained in the memory and associated with the simulated MTTR setting. The simulated write counter is also maintained in the memory, and is associated with the simulated MTTR setting. The simulated write counter provides a count of the number of times an element is removed from the simulated checkpoint queue, wherein the element is removed from the simulated checkpoint queue in response to a write out of a buffer from volatile memory and storing in nonvolatile memory.